

The following are some of the more important works published by Mr. Proctor:—*Saturn and its System* (1865), *Hand-book of the Stars* (1866), *The Constellation Seasons* (1867), *Half-Hours with the Telescope* (1868), *Other Worlds than Ours* (1870), *Star Atlas* (1870), *Light Science for Leisure Hours* (1871), *The Sun* (1871), *The Orbs Around Us* (1872), *Essays on Astronomy* (1872), *The Expanse of Heaven* (1873), *The Moon* (1873), *The Borderland of Science* (1873), *The Universe and the Coming Transits* (1874), *The Transit of Venus* (1874), *Our Place among Infinities* (1875), *Myths and Marvels of Astronomy* (1877), *The Universe of Stars* (1878), *Treatise on the Cycloid* (1878), *Flowers of the Sky* (1879), *The Poetry of Astronomy* (1880), *Mysteries of Time and Space* (1883), *The Universe of Suns* (1884), *The Seasons* (1885), *Other Suns than Ours* (1887), *Old and New Astronomy* (1888).

JOHN OBADIAH NEWELL RUTTER, who died at Black Rock, Brighton, July 27, 1888, was born in the Isle of Grain, Kent, April 19, 1799. Mr. Rutter was eminently a self-made man. At a very early age his father left England to try his fortunes in the then new colony of New South Wales, where he died in 1806, leaving his son to the care of his uncles and aunts in England, who trained and educated him in such fashion as the opening years of this century afforded. However, in after years he always spoke with gratitude of the kindness shown to him, especially of the motherly care he received at the hands of his aunt Cecilia, who became the wife of the late Dr. Lee, of Hartwell. Learning appears to have come natural to young Rutter, and even at the age of eight years he loved reading, and as years went on he eagerly devoured everything in the way of books brought within his reach. Apprenticeship to a trade followed as a matter of course to one in his position.

As a young man he took to scientific pursuits. He soon acquired a good knowledge of chemistry, and lectured thereon on several occasions. Before 1835 we find him greatly interested in the manufacture of coal-gas, and in the autumn of that year he removed to Brighton to take charge of the Brighton Gas Light and Coke Company. This proved to be the work of his life. From that date until 1882, a period of forty-seven years, his best thoughts were devoted to the service of that company. His own words, in which he desired to record the work of his life, are:—"During fifty years I was engaged, in addition to my other occupations, in promoting the domestic uses of gas. More than half a million of my publications on that subject have been sold."

In addition to chemistry Mr. Rutter devoted himself closely to electricity, upon which subject he gave popular lectures. In 1850 he patented an electric indicator, or fire and thief alarm, and a working model of its adaptation to a house was exhibited in the 1851 Exhibition. In 1854 he published a work on

Human Electricity. For forty years, with but slight intermission, he had one of Alexander Bain's electric clocks at work. As a meteorologist he was most painstaking and diligent in taking observations. As a boy he had knocked about a good deal off the Hampshire coast, and the knowledge then acquired of tides, wind, currents, and nautical matters never forsook him. His fifty-three years' residence in one house at Black Rock gave him a very accurate knowledge of the meteorology of Brighton.

This is not the place in which to record his inner life. We may only say that he was a most charitable man, and as years increased the love of giving increased. He spent a busy, practical, and useful life, with only a brief period of rest. He laid down to die after he had commenced his 90th year.

He was elected a Fellow of this Society, 1835, January 9.

JAMES WIGGLESWORTH was born in 1825, and during the whole of a very busy life had but one recreation, viz. the study of Astronomy. He was an exceedingly careful observer, and had it not been that his health gave way almost immediately after the erection of his large observatory at Scarborough, much good work would have been done there with the assistance of Mr. Lohse, who was engaged by him as observer. Mr. Wigglesworth was on very intimate terms with the late Thomas Cooke, and in 1853 purchased the first 6-inch refractor made by him. This instrument was in use by Mr. Wigglesworth for thirty years. In 1879 Mr. Wigglesworth purchased the Buckingham Works of Messrs. Cooke at York, and that old firm of eminent opticians is now carried on by his son in connection with Messrs. F. and T. Cooke. Mr. Wigglesworth was elected a Fellow of this Society 1885, January 9.

(Omitted Obituary for 1883.)

KARL KNORRE, the son of Christoph Knorre, Extraordinary Professor of Astronomy in the University of Dorpat, was born in that town $\frac{28 \text{ March}}{9 \text{ April}}$, 1801. In his tenth year he lost his father, whose widow, being left with three children, and in poor circumstances, then went to live with her brother, Karl Senff, who was also a professor in the Dorpat University.

Knorre had from childhood shown great mathematical talent, which rapidly developed under the encouraging instruction of his father into a striking inclination for the exact sciences. This gave him the power even during the lifetime of his father (while yet only eight years old) to perform some minor services in the teaching of mathematics, and after his father's death the boy assisted his mother with the small income derived from the lessons which he gave.

In 1812 Knorre entered the Dorpat Gymnasium, and five years later proceeded to the University, where, in accordance with the wish of his uncle, he commenced the study of theology.